

AMENDMENTS TO THE SPECIFICATION**IN THE SPECIFICATION:**

Please replace the paragraph beginning on Page 2 Line 32 with the following amended paragraph:

A second conventional technology that discloses a method of realizing a load distribution system for a radio network controller in a mobile network communication system is explained next (see, for example, Non-patent Reference 1). Fig. 2 is a block diagram of a constitution of a load distributing radio network controller in the second conventional technology. In Fig. 2, a mobile communication terminal (MS) 101 is connected to one or more IP (Internet Protocol) connectable base stations (IP-BSSs) ~~102~~ 112 through a radio network. The base station ~~102~~ 112 is connected, via an edge router 117 and based on the IP, to a Cell-corresponding Station-corresponding Radio Bearer Server (hereinafter, "C-RBS") 113 that performs user plane radio access network control corresponding to a cell, a Cell-corresponding Radio Bearer Server (hereinafter, "S-RBS") 114 that performs user plane radio access network control corresponding to a station, a Cell-corresponding Station-corresponding Signaling Server (hereinafter, "C-SS") 115 that performs signal plane radio access network control corresponding to a cell, and a Cell-corresponding Signaling Server (hereinafter, "S-SS") 116 that performs signal plane radio access network control corresponding to a station. The edge router 117, the C-RBS 113, the S-RBS 114, the C-SS 115, and the S-SS 116 perform radio access network control in association with one another. The servers 113 to 116 are connected to an IP-based core network 118 via the edge router 117.

Please replace the paragraph beginning on Page 4 Line 17 with the following amended paragraph:

However, in the radio access network of the load distribution type described in the second conventional technology, it is necessary to transmit the paging message from the core network 118 to the servers 113 to 116. Thus, there is a problem in that there is an increase in paging traffic. In addition, a radio access network control function is distributed to the servers 113 to 116. Thus, to transmit the paging message received from the core network 118 to the base station ~~102~~ 112, it is necessary to determine a server to which the paging message should be transmitted out of the other servers having the function, and transmit the paging message to the server determined. Therefore, there is also a problem in that traffic required for paging processing in the radio access network increases.

Please replace the paragraph beginning on Page 6 Line 19 with the following amended paragraph:

DISCLOSURE OF INVENTION

To achieve the above objectives, the paging control method according to the present invention includes a core network; a radio access network including a plurality of base stations and a radio network controller serving as a paging control apparatus that includes two or more controllers that distribute communication between the core network and the base stations for each function and control the communication, one of the controllers processing a paging message transmitted from the core network to the radio access network; and a mobile communication

terminal that performs communication with the base station via a radio interface, the paging control apparatus method including a first step of receiving the paging message transmitted from the core network to the radio access network; and a second step of judging a transmission destination of the paging message and transmitting the paging message to the controller that controls a base station at the transmission destination.

Please replace the paragraph beginning on Page 7 Line 30 with the following amended paragraph:

BEST MODE(S) FOR CARRYING OUT THE INVENTION

Exemplary embodiments of a paging control method, a paging control apparatus, and a radio access network according to the present invention are explained in detail below with reference to the accompanying drawings.

First embodiment

Please replace the paragraph beginning on Page 12 Line 1 with the following amended paragraph:

According to the first embodiment, the paging message from the core network 18 is transmitted to only the paging control server 19. The paging control server 19 transmits the paging message to the C-SS 15 or the C-RBS 13 that manages the base station 12 to which the paging message should be transmitted. Thus, it is possible to reduce paging traffic from the core network 18. It is also possible to reduce paging traffic in the radio access network 20, which increases when the function of the radio network controller in the radio access network 20 is

distributed to a plurality of servers, and to reduce loads of paging processing by the respective servers.

Second embodiment

Please replace the paragraph beginning on Page 15 Line 12 with the following amended paragraph:

To start communication, the mobile communication terminal 1 performs processing for establishing signal connection between the mobile communication terminal 1 and the radio access network 20. First, the mobile communication terminal 1 transmits a signal connection establishment request signal to the base station 12. The base station 12 transmits a received signal to the C-RBS 13. The C-RBS 13 extracts the signal connection establishment request signal from the received signal and transmits the signal connection establishment request signal to the C-SS 15 (601). The C-SS 15 enters into an establishment operation for signal connection from the mobile communication terminal 1 in response to reception of the signal connection establishment request signal. In the establishment operation, the C-SS 15 selects the S-RBS 14 that manages physical channel setting for signal connection and transmission and reception of the signal connection between the mobile communication terminal 1 and the base station 12, and selects the S-SS 16 that processes a signal between the base station and the mobile communication terminal (602). The C-SS 15 transmits the received signal connection establishment request signal to the S-SS 16 selected (603).

Please replace the paragraph beginning on Page 16 Line 21 with the following amended paragraph:

After the signal connection between the base station 12 and the mobile communication terminal 1 is established, the S-SS 16 enters into an establishment operation for signal connection between the mobile communication terminal 1 and the core network 18. First, the S-SS 16 transmits an establishment request message for signal connection between the mobile communication terminal 1 and the core network 18 to the core network 18 (609). After connection with the core network 18 is established (610), the S-SS 16 transmits a message for performing setting for connection between the mobile communication terminal 1 and the S-SS 16 to the mobile communication terminal 1 using the signal connection between the core network 18 and the mobile communication terminal 1 established as described above (611). When the S-SS 16 receives a response message from the mobile communication terminal 1 for the setting (612), establishment of signal connection between the mobile communication terminal 1 and the core network 18 is complete. Thereafter, the core network 18 notifies the mobile communication terminal 1 of an identifier for specifying the mobile communication terminal 1 using the signal connection (613), and then also notifies the S-SS 16 of the identifier (614). The S-SS 16 notifies the paging control server 19 of the identifier for specifying the mobile communication terminal 1 and the signal connection notified (615). The paging control server 19 stores these pieces of information in association with information on the signal connection (616).

Please replace the paragraph beginning on Page 19 Line 7 with the following amended paragraph:

According to the second embodiment, in the distributed radio access network, when signal connection is established between the mobile communication terminal 1 and the core network 18 or the radio access network 20, signal connection information associating the signal connection, a server that controls the signal connection, and the mobile communication terminal 1 is stored in the paging control server 19 that processes a paging message transmitted from the core network. Thus, even when a paging message is received from another core network 18 that does not establish signal connection, it is possible to transmit a paging message to the mobile communication terminal 1 corresponding to the core network 18 using the signal connection. This makes it possible to perform transmission processing for a paging message even in case of multi-call paging. When the core networks 18a and 18b connected to the radio access network 20 affix terminal identifiers of independent number systems to the mobile communication terminal 1, respectively, it is also possible to perform transmission processing for a paging message efficiently. As in the first embodiment, to determine a server to which a paging message should be transmitted, it is possible to control transmission processing for a paging message exchanged among distributed servers and control an increase in traffic.

Third embodiment

Please replace the paragraph beginning on Page 22 Line 1 with the following amended paragraph:

According to the third embodiment, the core network 18 is capable of using, for paging, a

mobile communication terminal identifier different from an identifier that is set when a mobile communication terminal first establishes signal connection. Consequently, the radio access network 20 can cope with a plurality of mobile communication terminal identifiers that are used at the time of paging.

Fourth embodiment